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Arctic Crater Expedition to Seek Mars Science Insights and Test Future Exploration Technologies

NASA scientists will explore a barren Arctic meteorite impact crater to attempt to learn more about Mars and its early history, while testing technologies useful for future robotic and human exploration of the planet.

Through July 26, a 20-member science team from NASA and several other research organizations will explore the Haughton Impact Crater and its surroundings on Devon Island in the Arctic Circle.

Scientists consider the site a potential Mars analog because many of its geologic features, such as the crater's ice-rich terrains, its ancient lake sediments and nearby networks of small valleys, resemble those reported on the surface of Mars.

During the expedition, Dr. Omead Amidi and other engineers from Carnegie Mellon University's Robotics Institute, Pittsburgh, PA, will conduct field tests of an experimental, robotic helicopter.

Carnegie Mellon's, 160-pound autonomous helicopter has vision-based stability and position control, as well as an onboard navigation computer, laser rangefinder and video system for site mapping. More information about the unpiloted helicopter may be found at the following website: <http://www.ri.cmu.edu/project/chopper>

Scientists also will conduct experiments with a ground-penetrating radar system, a field spectrometer, drilling equipment and a stereo camera.

The radar system will be deployed in an attempt to map ground-ice and other subsurface conditions within and outside the crater's 12-mile diameter.

Scientists will use a field spectrometer to determine the site's reflective qualities and better understand the crater's compositional evolution. In another experiment, scientists will use a portable drill to obtain core samples from ten feet deep in the frozen ground. Core samples of sediments from a lake that once occupied the crater will provide information about local climate evolution.

A portable stereo camera system will provide high-resolution images of the site and produce images for a 360 degree photo-realistic virtual reality project being developed by Ames

Research Center Intelligent Mechanisms Group.

Using laptop computer systems and "mobile workstations", scientists will communicate with other field team members and send live images via a wireless link. Team members will operate from a base camp on a terrace of the Haughton River within the crater's perimeter and explore the site with All-Terrain Vehicles. Supplies will be brought in by Twin Otter airplane, while a helicopter will aid exploration of remote sites.

As part of the expedition's educational outreach program, the following website will be updated regularly with new data and images as available: <http://www.arctic-mars.org>

Seven Companies To Provide Technology Services

NASA has selected seven companies to fulfill a multi-billion dollar contract that will apply a "faster, better, cheaper" approach to the way the Agency obtains desktop computers and local communication services.

Outsourcing Desktop Initiative for NASA (ODIN), will deliver comprehensive desktop computer, server, and intra-center communications services to NASA and NASA contractors. Other government agencies will be able to buy from ODIN contractors through the General Services Administration.

Under the contract, NASA will define the computer and communications capabilities for each job within the Agency and purchase a particular bundle of hardware, software and communications equipment for each "seat." The price for each type of "seat" will be fixed.

The successful offerors are: Boeing Information Services, Inc., Vienna, VA; Computer Sciences Corporation, Laurel, MD; Dyncorp TECHSERV, LLC, Reston, VA; FDC Technologies, Bethesda, MD; OAO Corporation, Greenbelt, MD; RMS Information Systems, Inc., Lanham, MD; and Wang Government Systems, Inc., McLean, VA.

Information on the ODIN initiative can be found at the following Web site: <http://outsource.gsfc.nasa.gov>.

Wallops Shorts.....

Balloon Launch

A 29.47 million cubic foot NASA scientific balloon was launched June 18 from Fairbanks, AK. The experiment was a hard x-ray and the flight was an engineering test of Ultra Long Duration Balloon equipment. The balloon was prematurely terminated for operational reasons. The payload was successfully recovered and will be flown at a later date. Dr. Robert Lin, University of California, Berkeley was the principal investigator.



Dyncorp employee, Dave Kohut, carries suitcases to be loaded on the P-3 Orion aircraft. Personnel departed Wallops Friday, June 26 to conduct ice mapping missions in Greenland.

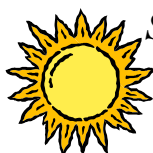
Digital photo by Rick Huey

Fifth Annual NASA Tire/Runway Friction Workshop

Over 100 participants from 10 countries attended the fifth annual NASA Tire/Runway Friction Workshop held recently at Wallops. This year marked the first time representatives from Germany and Brazil have attended the workshop.

During the weeklong workshop, 10 technical presentations were made and over 200 friction test runs were conducted using 10 different vehicles on 24 runway and taxiway test surfaces. In addition to the friction tests, over 50 surface texture and roughness measurements were collected using 4 devices. The NASA Langley Research Center instrument tire test vehicle participated in the tests. Prior to this year's workshop, four new overlay test surfaces were installed on the north/south and east/west taxiways.

The test engineer was Tom Yager, Langley Research Center and the Wallops project coordinator was Joan Selby, Computer Sciences Corporation.



Sun Sense

One out of five Americans will contract skin cancer in their lifetime. For individuals who work outside, the rate is even higher. Eighty percent of skin cancers occur on the face, hands, neck and head.

While outside in the sun, your skin is working overtime to protect itself. The first noticeable sign of sun exposure is slight redness on your skin. The redness turns to a sunburn two to six hours later. It then peaks at 12 to 16 hours and normally fades in a couple of days if there is not further exposure.

The sun's rays are the culprits. The warmth you feel on your skin is from UVA and UVB rays. Together these rays can cause serious damage. Within minutes of exposure to the sun, the skin's cells produce melanin, the pigment that causes the skin to darken or tan. Contrary to popular belief, tanned skin is not a sign of health. It is an indication that the skin is trying to protect itself from damage. Over the years, too much exposure will cause premature aging (that leathery look) and may contribute to more serious problems such as skin cancer.

With proper protection, the risk of getting skin cancer can be significantly reduced. Here are some simple-to-follow guidelines:

- Wear the right clothing: long-sleeve, tightly woven shirts; broad-brimmed hats; long pants.
- Use a sunblock with a rating of SPF 15 or higher and apply it generously. The higher the SPF, the more protection you will get. Also, don't forget to apply sunscreen on cloudy days! The sun's rays still penetrate through the clouds.

- Apply sunblock 30 minutes before going outside.

Learn to spot the possible warning signs of skin cancer.

If any of the following warning signs are detected, make an appointment with your doctor for a thorough check-up.

- One half of a skin mole does not match the other half.
- Edges of a mole are ragged, notched or blurred.
- The mole is a shade of tan, brown, black red or blue giving it a molted look.
- A mole or growth that is larger than a pencil eraser or that is growing rapidly.

Notice

Due to preparations for the July 15 GSFC Property Sale, the Excess Office will provide limited service for emergencies only. There will be no screening through July 15, 1998. For further information call Erich Gillespie, x1854.



Wallops Supporting Summer Education Programs

Wallops personnel are seeing quite a few new faces this summer as the facility supports several educational programs for students and teachers.

Nine local high school students are on site as part of the Summer High School Apprenticeship Program and the National Space Club Scholars Program. We also have two teacher interns from the Accomack County School System.

Wallops and UMES have teamed up in the BRIDGE Program, designed for students entering engineering, aviation and computer science programs at UMES. The fifteen pre-college students are at Wallops two to three afternoons each week.

In mid-July, 25 science and math teachers will visit Wallops for five days as part of the NASA NEWMAS program, designed to familiarize teachers with NASA research and ways to apply the research in the classroom.

During the same period, 28 middle school students will be at Wallops for the Spaceflight Academy with the Virginia Space Flight Center and Old Dominion University.

Electro-Static Discharge Awareness Training

(4 hours - 1 session)
July 21 - 8 a.m. to noon
Building E-104, Room 307

DESCRIPTION: This course trains technicians, engineers, procurement, shipping and receiving personnel and management in the dangers of electrostatic charges on an electronic part in accordance with NHB 5300.4(3L). A combination of lecture, videotape and view graphs will be used to show students potential hazards when working around electronic devices. Demonstrations on the proper use of electrostatic preventive equipment are a large part of this course. Photographs of electrostatic devices that have caused launch delays will be discussed along with how the electrostatic charges were created.

Cost is covered for civil servants by Center funds. Contractor cost is \$125 per student. Interested employees should contact Sherry Kleckner, x1204, for the registration form. A training request is not required for this class.

RETAIL SALE OF SURPLUS COMPUTERS Noon July 14 Building F-3

Inspection: July 14
11 - 11:45 a.m.
Building F-3

We will offer 50 (or more) working 486 IBM compatible and Macintosh systems (including monitor, computer & keyboard - some w/printer).

These systems have been checked out and are up and running. Systems are already priced and must be paid for by 2 p.m. by Mastercard, Visa, cash or money order.

NO PERSONAL CHECKS, NO REFUNDS. EVERYTHING SOLD AS IS.

If you've been wanting to get a computer to use at home, or if you'd like to get one for your child...NOW IS THE TIME!!!



*The next edition of
Inside Wallops will
be July 13. Have a
safe July 4 holiday.*

Chairperson Extends Thanks

Bonnie Carroll, Chairperson for this year's Saving Bond Campaign said, "The campaign has ended, but there is an important message for employees. Start saving early and stick with it." She added that even if you don't begin early, it's never too late to start a routine savings plan.

"I would like to thank all those who helped make the campaign a success—especially the key workers. Thanks again for a great campaign," Carroll said.

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